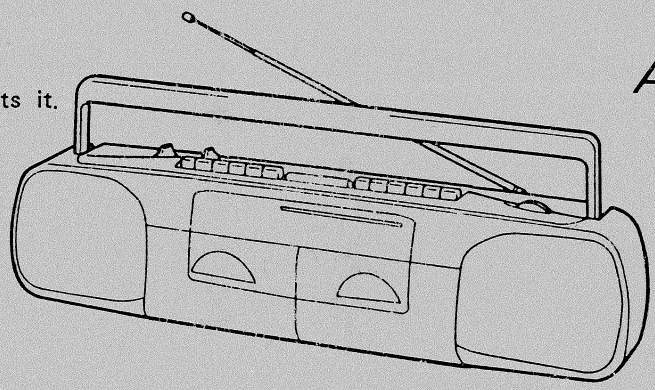
SERV. 30 286

# CFS-W303

# SERVICE MANUAL

Discard CFS-W303 Service Manual (No.9-953-631-12) previously issued.
This Service Manual containts it.

*US Model*
*Canadian Model*
*E Model*
*Australian Model*
*AEP Model*



CABINET COLOR : WHITE, BLACK, RED

| Model Name Using Similar Mechanism | CFS-W301 |
|---|---|
| Tape Transport Mechanism Type | MF-W303PB-75D (DECK A) |
| | MF-W303RP-75D (DECK B) |

## SPECIFICATIONS

**Audio power specifications (US, E, Australian model)**

POWER OUTPUT AND TOTAL HARMONIC DISTORTION
With 3.2-ohm loads, both channels driven, from 150 to 10,000Hz; rated 1.7W per channel minimum RMS power, with no more than 10% total harmonic distortion in AC operation.

**Other specifications**

Frequency range

| | FM | AM |
|---|---|---|
| US, Canadian, E, Australian model | 87.6 -108MHz | 530 -1,710kHz |
| AEP model | 87.6 -107MHz | 531 -1,602MHz |
| Italian model | 87.5 -108MHz | 526.5 -1,606.5MHz |

| | |
|---|---|
| Recording system | 4-track, 2-channel stereo |
| Frequency response | 80 -10,000Hz |
| Speakers | Full-range : 10cm (4 inches) dia. ×2 |
| Output | Headphones jack (stereo minijack) for 16 -68 ohm impedance headphones |
| Power output | Canadian, Italian model : 2.3W+2.3W (with 10% harmonic distortion; AC operation) |
| Maximum power output | AEP model : 4.6W (2.3W+2.3W) (with 10% harmonic distortion; AC operation) |
| Power requirements | US, Canadian, E model : 120V AC, 60Hz<br>Australian model : 240V AC, 50Hz<br>AEP, Italian model : 220V AC, 50Hz<br>9V DC, six size D (R20) batteries |
| Power consumption | 14W in AC operation |

Battery life

| Batteries | FM recording |
|---|---|
| Sony SUM-1 (NS) | Approx. 13 hours |
| Sony AM1 alkaline | Approx. 19.5 hours |

| | |
|---|---|
| Dimensions | Approx. 566×148×150mm (w/h/d) (22 3/8 ×5 7/8 ×6 inches) incl. projecting parts and controls, not incl. handle |
| Weight | Approx. 3.5kg (7 lb 11 oz) incl. batteries |
| Accessory supplied | AC power cord (1) |

Design and specifications subject to change without notice.

**SAFETY-RELATED COMPONENT WARNING!!**

**COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.**

**ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!**

**LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.**

MICROFILM

## RADIO CASSETTE-CORDER

SONY®

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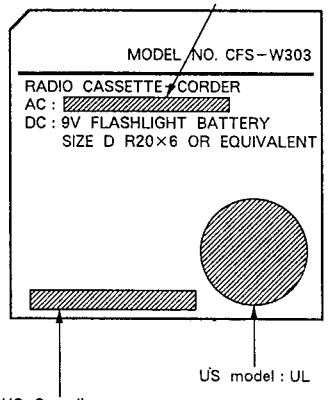
MODEL IDENTIFCATION

–Model Number Label–

US, Canadian, E model : 120V 60Hz 14W
Australian model : 240V~50Hz 14W
AEP, Italian model : 220V~50Hz 14W




US, Canadian,
AEP, Italian model : MADE IN MALAYSIA
E model : SONY CORP.
Australian model : MADE IN MALAYSIA
UNDER LICENSE FROM
SONY CORP. TOKYO JAPAN

## SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

### LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

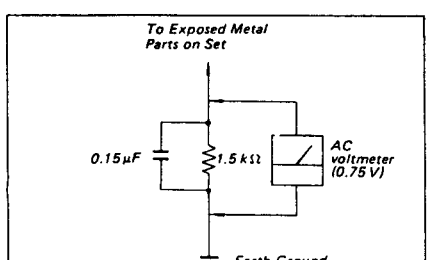



*Fig. A. Using an AC voltmeter to check AC leakage.*





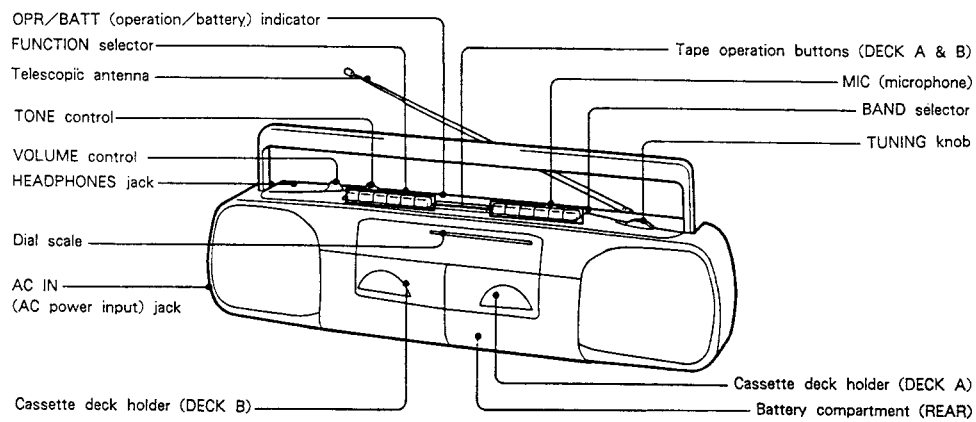
SERVICE NOTE

- **Repairing printed resistor**
  Cut both sides of the resistor and solder the carbon resistor having same value in place of printed one of the conductor side.
  1/4W carbon resistor is supplied for the replacing part of the printed resistor.

- **Note for tape operation buttons**
  When replacing tape operation buttons, cut them off and attach new parts with lockig compound.

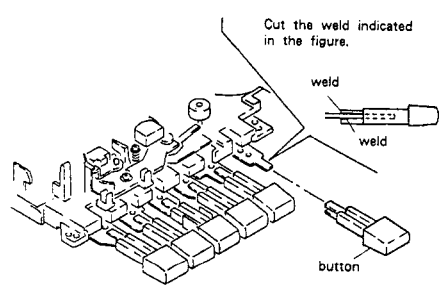
- **Note on replacing ceramic filters CF1 and CF3.**
  Two ceramic filters which have the same center frequency are included in the part whose part No. is 1-567-166-00.
  • For CF1 (FM IF) ····· 3 leads
  • For CF3 (FM discriminator) ····· 2 leads
  when replacing CF1 or CF3, be sure to replace both of them with new parts.

### LOCATION AND FUNCTION OF CONTROLS




## SECTION 1
## DISASSEMBLY

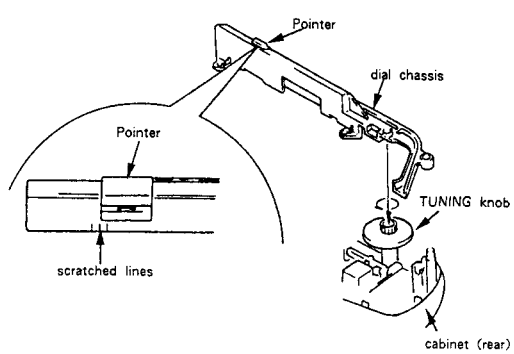
### REMOVAL OF TAPE OPERATION BUTTON




Note on Installation
1. Insert the buttons firmly.
2. Attach the buttons with locking compound.

### DIAL POINTER INSTALLATION

1. Turn TUNING knob fully counterclockwise.
2. Set the left end of the pointer to the middle of the scratched lines.



# SECTION 2
# MECHANICAL ADJUSTMENTS

## PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab :
   record/playback head　　Pinch roller
   erase head　　rubber belts
   capstan　　idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

## 2-1. Torque Measurement (DECK-A/DECK-B)

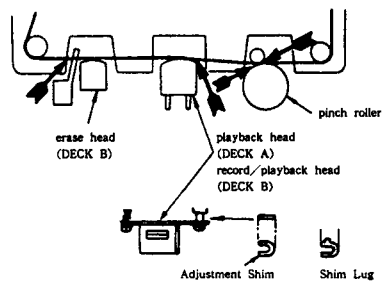
| Torque | Torque meter | Meter reading |
|---|---|---|
| FWD | CQ-102C | 25–50g·cm (0.35–0.7oz·inch) |
| FWD Back Tension | | 2–5g·cm (0.03–0.07oz·inch) |
| FF | CQ-201B | 65–110g·cm (0.9–1.53oz·inch) |
| REW | | 65–110g·cm (0.9–1.53oz·inch) |

**Tape Tention Measurement**

| Mode | Torque meter | Meter reading |
|---|---|---|
| FWD | CQ-403A | more than 170g (more than 6oz) |

## 2-2. Head Height Adjustment
DECK-A/DECK-B

**Procedures :**
1. DECK-A : playback mode
   DECK-B : record mode
2. Test Cassette : CQ-009C
3. Viewing from the front, adjust the head heights to eliminate tape curl and tape twist at portions of arrow. If a satisfying result is not provided with only turning the screws, change the adjustment shim or the shim lug.




**Adjustment Shim**
3-578-138-01 (t=0.1)
3-578-138-11 (t=0.2)
3-578-138-21 (t=0.3)

**Shim Lug**
3-331-108-01 (t=0.1)
3-331-108-11 (t=0.2)
3-331-108-21 (t=0.3)
3-331-108-31 (t=0.4)
3-331-108-41 (t=0.5)





# SECTION 3
# ELECTRICAL ADJUSTMENTS

## 3-1. TAPE RECORDER SECTION

1. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
2. The adjustments should be performed for both L-CH and R-CH.

• Switches and controls should be set as follows unless otherwise specified.
FUNCTION ····· TAPE (RADIO OFF)
TONE ····· MAX

• Standard Record :
Deliver the standard input signal level to the input jack and set the VOLUME control to obtain the standard output signal level.

**• Standard Input Level**

| Input terminal | Tuner IN (KH100 on main board) |
|---|---|
| Input level | 0.069V (−21dB) |

**• Standard Output Level**

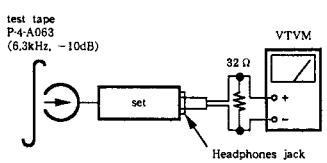
| Output terminal | PHONES | Speaker SP901,902 |
|---|---|---|
| Load impedance | 32Ω | 3.2Ω |
| Output level | 0.25V (−10dB) | 0.775V (0dB) |

**Test tape**

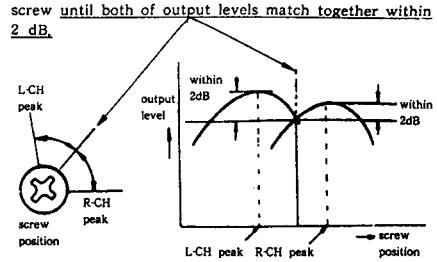
| Type | Signal | Used for |
|---|---|---|
| P-4-A063 | 6.3kHz, −10dB | Azimuth Adjustment |
| WS-48A | 3kHz, 0dB | Tape Speed Adjustment |

## 3-1-1. Record/playback Head Azimuth Adjustment
DECK-A/DECK-B

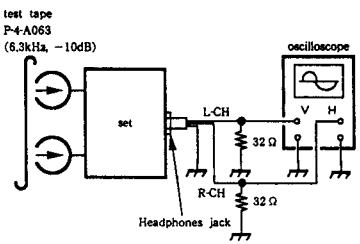
**Procedure :**
1. Mode : playback

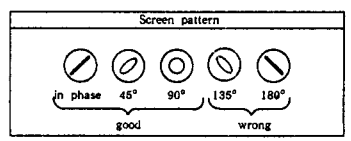


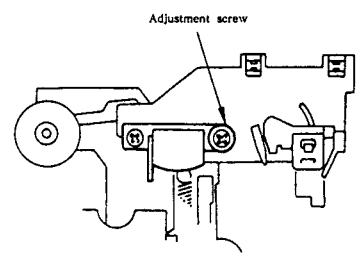

2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 2 dB.




3. Phase Check
Mode : playback



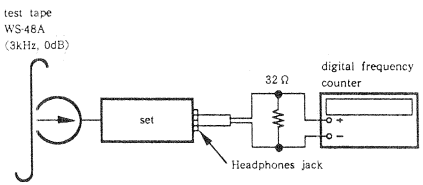



### 3-1-2. Tape Speed Adjustment
DECK-A／DECK-B

**Procedure :**

Mode : playback

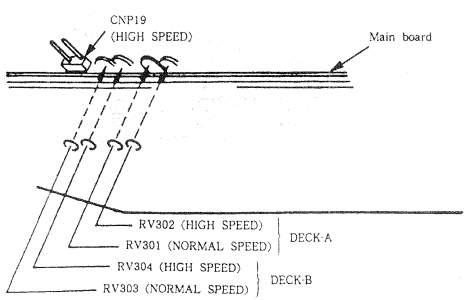



1. Short the CNP19. (It results in high speed mode.)
2. Insert WS-48A in deck and put into playback mode.
3. Adjust adjustment element for the specified reading on the frequency counter.
   **Adjustment element :**
   DECK-A ·····RV302
   DECK-B·····RV304
4. Open CNP19 in step 1.(It results in normal speed mode.)
5. Insert WS-48A in deck and put into playback mode.
6. Adjust adjustment element for the specified reading on the frequency counter.
   **Adjustment element :**
   DECK-A ·····RV301
   DECK-B·····RV303

Specification (in the middle of the tape)

| Speed mode | Frequency counter |
|---|---|
| High speed | 5,685－5,715 |
| Normal speed | 2,970－3,000 |

Frequency difference between the beginning and the end of the tape should be within 1.5%.




### 3-1-3. Record Bias Adjustment
DECK-B

**Setting :**

TONE : mechanical mid
FUNCTION : RADIO
Open the connector, CNP21 of tuner board.

**Procedure :**

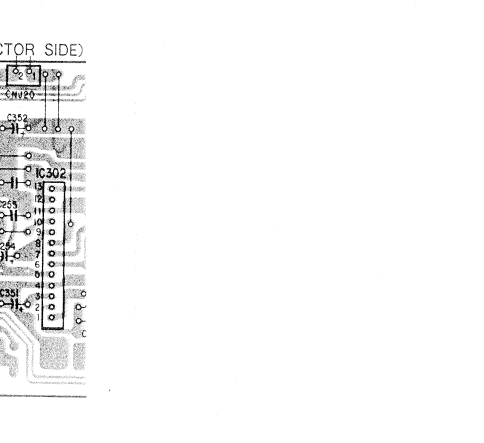
1. Mode : record

2. Mode : playback

Confirm that the 1kHz playback signal level is −10dB relative to the 315Hz signal.
If necessary, adjust by connecting or disconnecting JW185.
Repeat the procedures in each adjustment several times.
After adjustment, connecting CNP21.

| Pattern connection | 1kHz VTVM reading |
|---|---|
| disconnected (R315 out) | up |
| connected (R315 in) | down |

**Adjustment Location :** main board

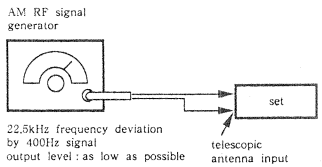


## 3-2. RADIO SECTION

### • FM Section

**Setting :**

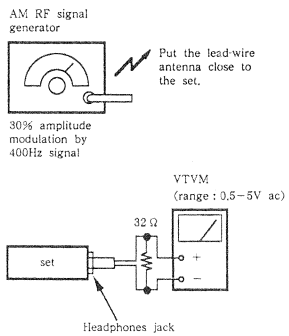
BAND switch : FM


AM RF signal generator
set
22.5kHz frequency deviation by 400Hz signal output level : as low as possible
telescopic antenna input

### • AM Section

**Setting :**

BAND switch : AM




● Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

| FM FREQUENCY COVERAGE ADJUSTMENT | |
|---|---|
| Adjust for a maximum reading on VTVM. | |
| L2 | CT2 |
| US, CND, E, AUS : 86.5MHz<br>AEP, IT : 87.35MHz | US, CND, E, AUS : 109.5MHz<br>AEP : 107.8MHz<br>IT : 108.3MHz |

| FM TRACKING ADJUSTMENT | |
|---|---|
| Adjust for a maximum reading on VTVM. | |
| L1 | CT1 |
| US, CND, E, AUS : 86.5MHz<br>AEP, IT : 87.35MHz | US, CND, E, AUS : 109.5MHz<br>AEP : 107.8MHz<br>IT : 108.3MHz |

| AM FREQUENCY COVERAGE ADJUSTMENT | |
|---|---|
| Adjust for a maximum reading on VTVM. | |
| L4 | CT4 |
| US, CND, E, AUS, AEP : 520kHz<br>IT : 516kHz | US, CND, E, AUS : 1,780kHz<br>AEP : 1,680kHz<br>IT : 1,630kHz |

| AM TRACKING ADJUSTMENT | |
|---|---|
| Adjust for a maximum reading on VTVM. | |
| L3 | CT3 |
| 600kHz | US, CND, E, AUS : 1,500kHz<br>AEP, IT : 1,400kHz |

| AM IF ADJUSTMENT |
|---|
| Adjust for a maximum reading on VTVM. |
| T1 |
| 455kHz |

**Note :**

CND : Canadian model

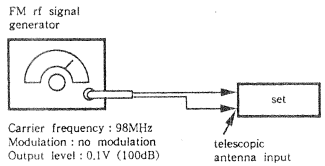
IT : Italian model



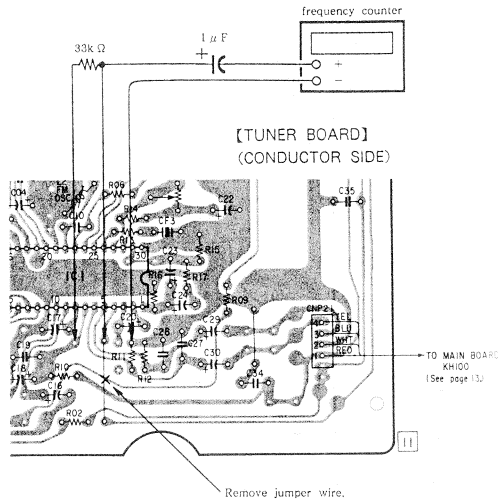
## VCO Adjustment

### A) Regular Method

**Procedure :**



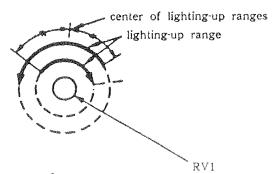

1. Remove jumper wire as shown right.
2. Connect frequency counter to the positions shown right.
3. Tune the set to 98MHz.
4. Adjust RV1 for 76kHz±500Hz reading on the frequency counter.
5. After adjustment, connect jumper wire removed in step 1.



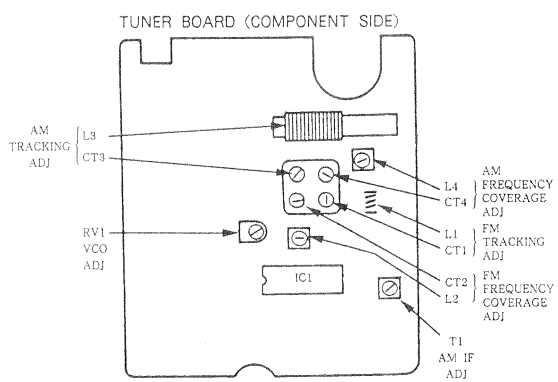

### B) Simple Method

**Procedure :**

1. Tune the set to the FM stereo broadcasting signal.
2. Turn RV1 clockwise or counterclockwise and memorize the lighting-up range of the FM STEREO lamp.
3. Secure RV1 at the center of the lighting-up range of both turns as shown below.

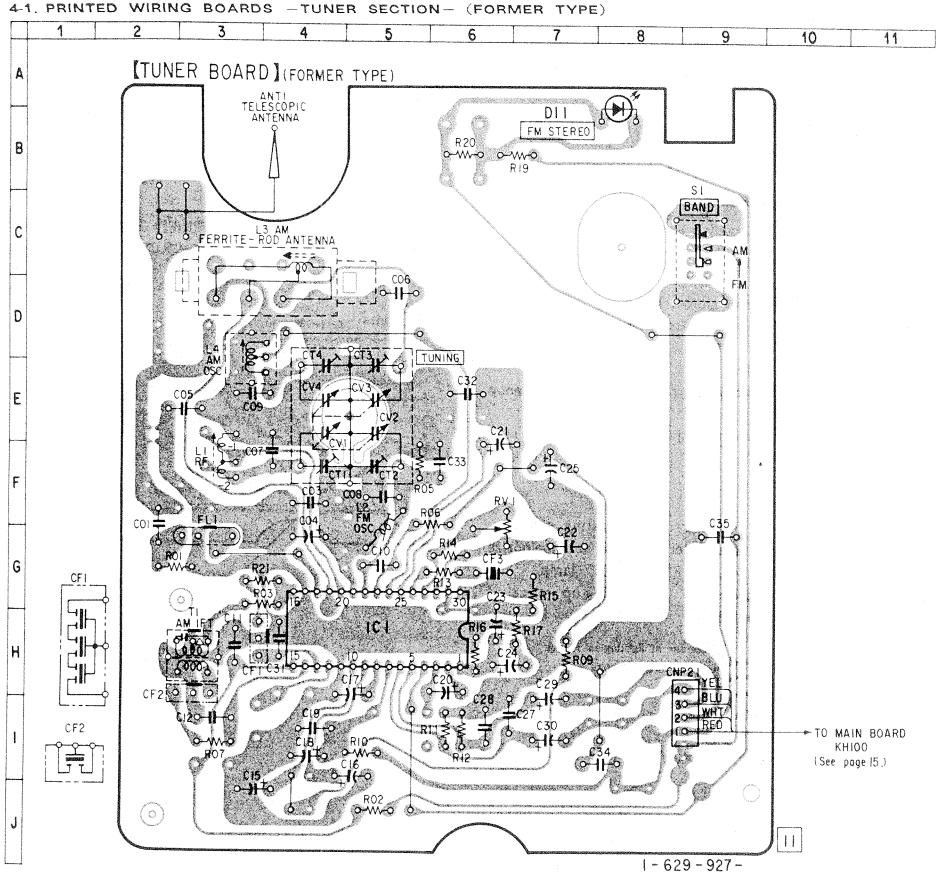



**Adjustment Location :** tuner board



# SECTION 4
# DIAGRAMS

## 4-1. PRINTED WIRING BOARDS —TUNER SECTION— (FORMER TYPE)

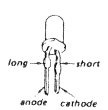



Note :

- ○— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ⬚← indicates side identified with part number.
- [ ] : Printed resistor.

**Semiconductors Lead Layout**

GL-3PR9

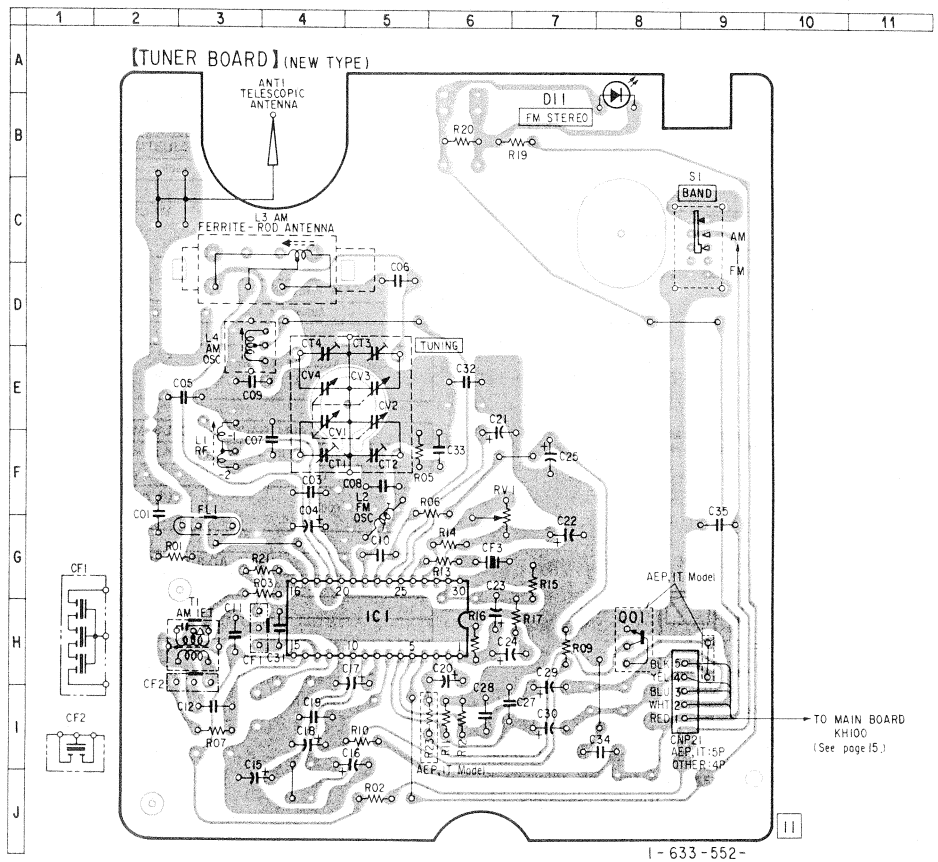



● SEMICONDUCTOR LOCATION

FORMER TYPE

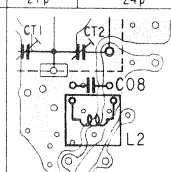
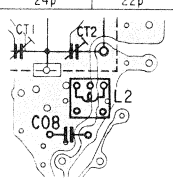
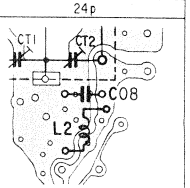
| Ref.No. | Location |
|---|---|
| IC1 | H-5 |
| D11 | B-8 |

(NEW TYPE)

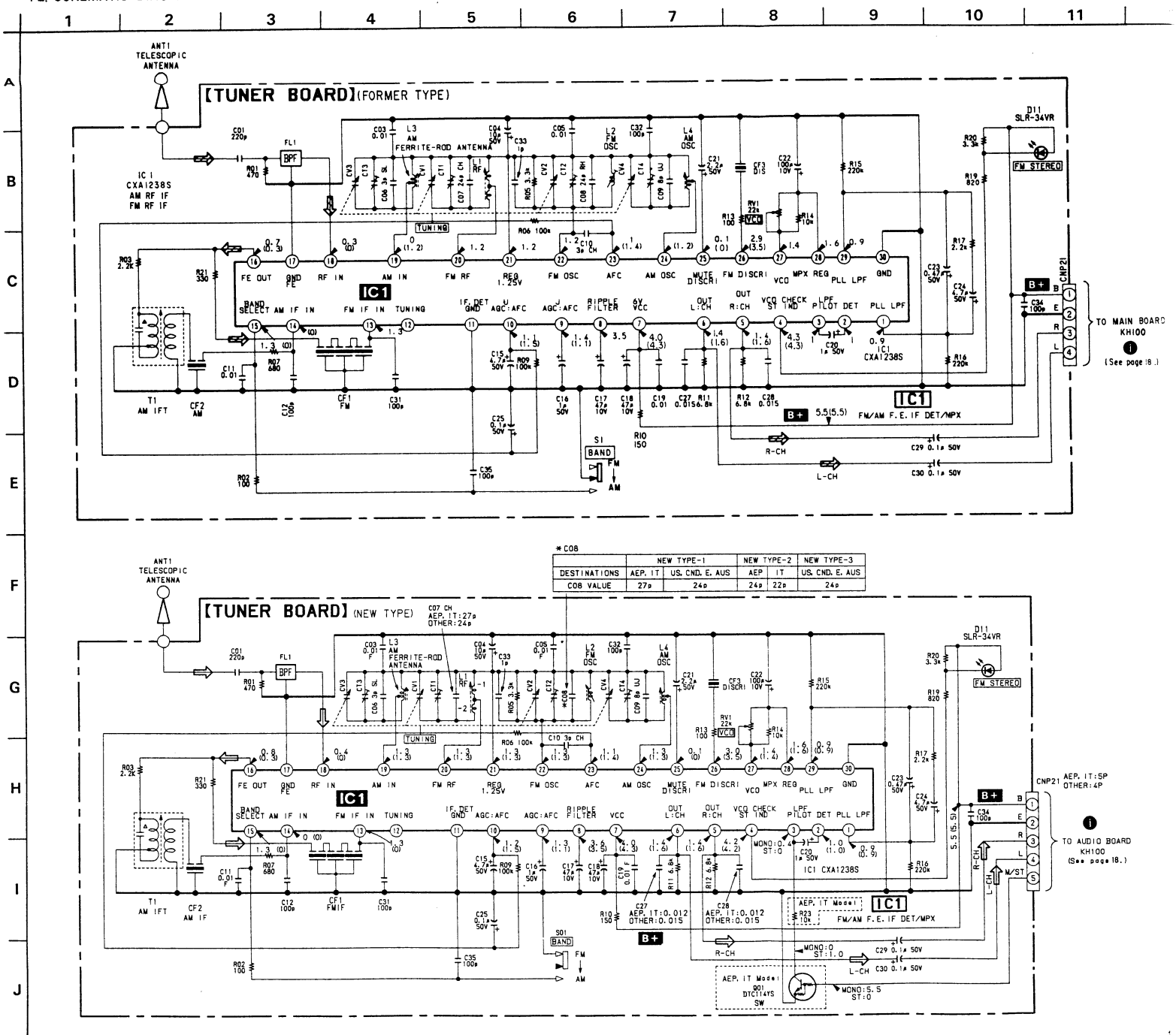



NEW TYPE

| Ref.No. | Location |
|---|---|
| IC1 | H-5 |
| Q1 | H-8 |
| D11 | B-8 |

| | NEW TYPE-1 | | NEW TYPE-2 | | NEW TYPE-3 |
|---|---|---|---|---|---|
| L2 | 1-459-815-11 | | 1-459-418-31 | | 1-406-161-11 |
| DESTINATIONS | AEP, IT | US, CND, E, AUS | AEP | IT | US, CND, E, AUS |
| C08 VALUE | 27p | 24p | 24p | 22p | 24p |
| MOUNTED POSITION |  | |  | |  |

## 4-2. SCHEMATIC DIAGRAM —TUNER SECTION—

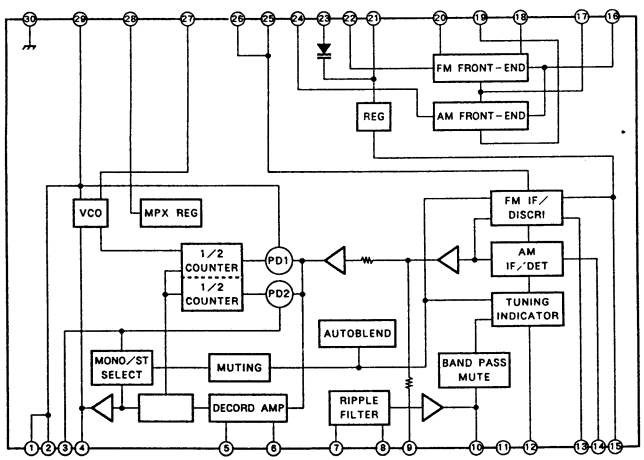


Note :

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- △ : internal component.
- B+ : B+ Line
- Total current is measured with no cassette installed.
- Power voltage is dc 9V and fed with regulated dc power supply from battery terminal.
- no mark : FM
  ( ) : AM
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM

## ● IC BLOCK DIAGRAM

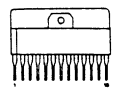
### IC1 CXA1238S



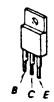



### Semiconductors Lead Layout

LA4597



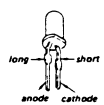
2SD1913SA




DTC114YS
DTC143TS

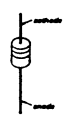
2SK105A-30

GL-3PRQ




2SA952
2SC1815-GR

RD6.8ES-B2
RD8.2ES-B2
1SS119
10E2



2SC2785-HFE

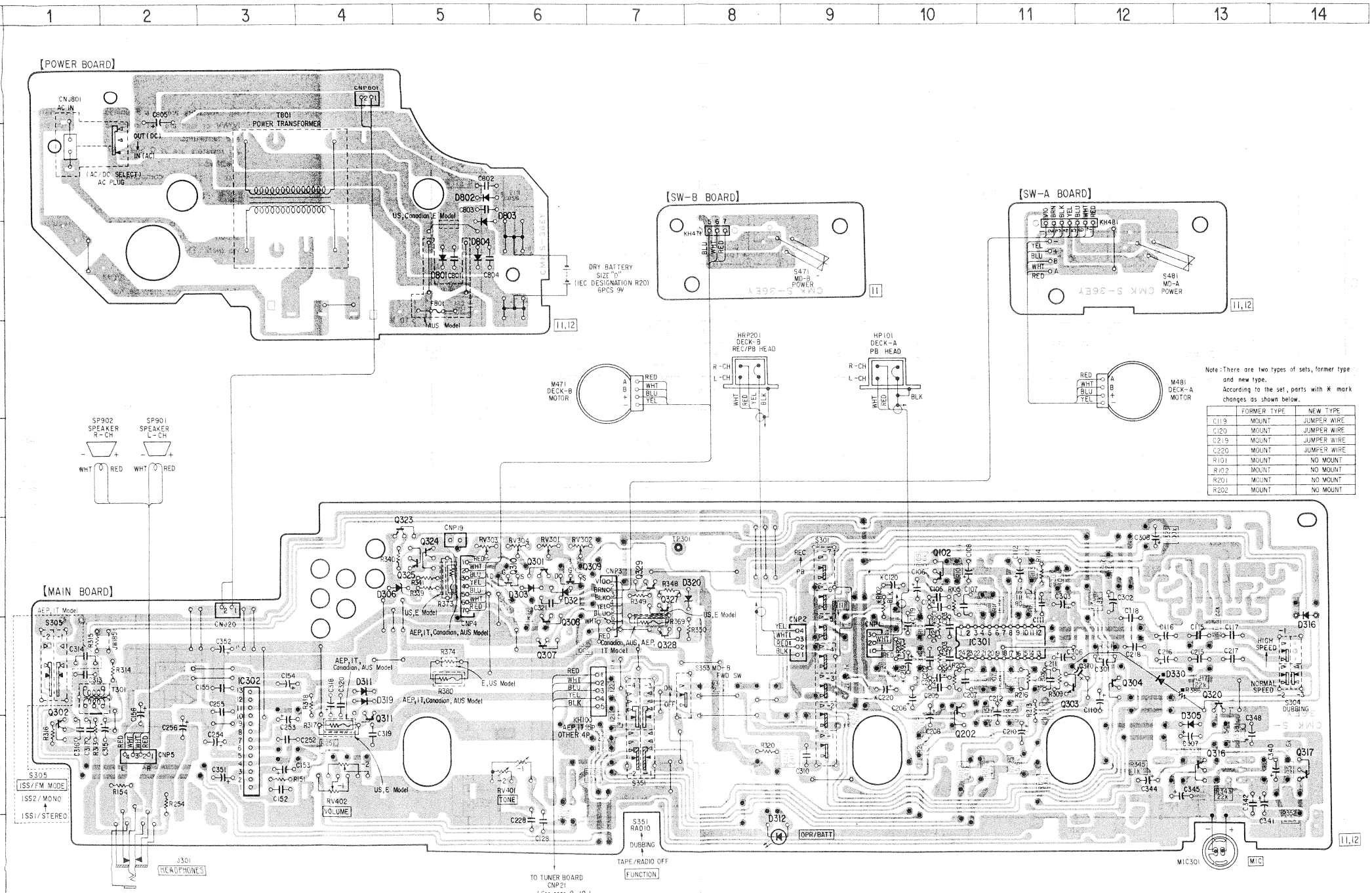
2SD773

### ● SEMICONDUCTOR LOCATION

| Ref.No. | Location | Ref.No. | Location |
|---|---|---|---|
| IC301 | G-10 | D303 | F-6 |
| IC302 | G-3 | D305 | H-13 |
| | | D306 | F-4 |
| Q102 | F-10 | D311 | G-4 |
| Q202 | H-10 | D312 | I-8 |
| Q301 | F-6 | | |
| Q302 | G-1 | D316 | G-14 |
| Q303 | G-11 | D320 | F-8 |
| | | D321 | F-6 |
| Q304 | G-12 | D323 | G-4 |
| Q307 | G-6 | D330 | G-12 |
| Q308 | G-6 | | |
| Q309 | F-6 | D801 | C-5 |
| Q310 | F-5 | D802 | B-5 |
| | | D803 | B-5 |
| Q311 | H-4 | D804 | C-5 |
| Q316 | H-13 | | |
| Q317 | H-14 | | |
| Q320 | G-13 | | |
| Q323 | F-5 | | |
| Q324 | F-5 | | |
| Q325 | F-5 | | |
| Q327 | F-7 | | |
| Q328 | G-7 | | |
| Q329 | F-7 | | |

Note :

- O— : parts extracted from the component side.
- ● : Through hole.
- ▒▒ : Pattern on the side which is seen.
- ▒▒ : Pattern of the rear side
- ▭ : Printed resistor

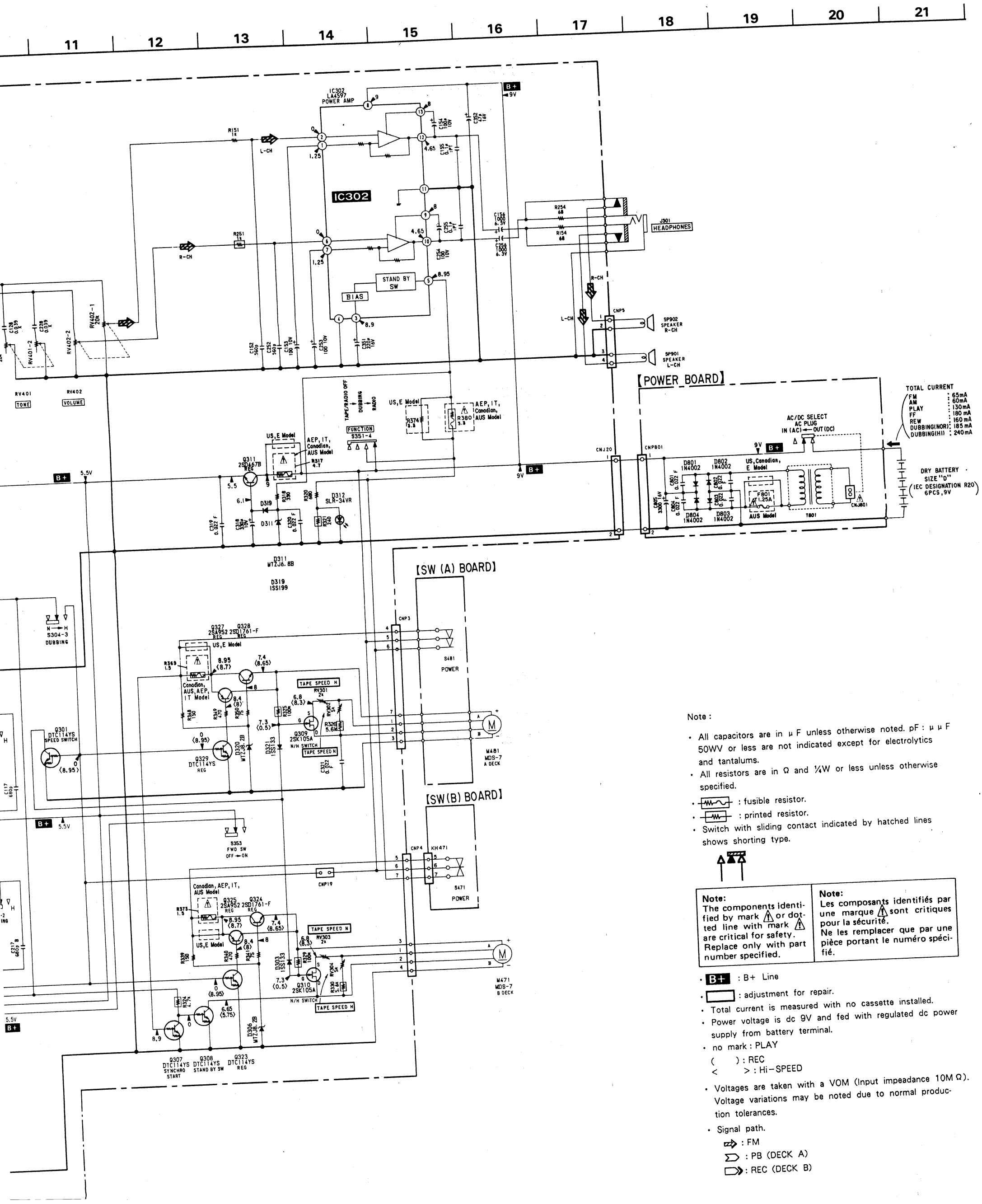

1
2
3
4
5
6
7
8
9
10
11
12
13
14
[POWER BOARD]
CNJ801
AC IN
CNPB01
T801
POWER TRANSFORMER
OUT (DC)
IN (AC)
(AC/DC SELECT)
AC PLUG
C805
C802
D802
C803
D803
D801
C801
D804
C804
F801
US, Canadian, E Model
AUS Model
DRY BATTERY
SIZE "D"
(IEC DESIGNATION R20)
6PCS 9V
11,12
[SW-B BOARD]
KH47
S471
MD-B
POWER
11
[SW-A BOARD]
KH48
S481
MD-A
POWER
11,12
HRP201
DECK-B
REC/PB HEAD
HP101
DECK-A
PB HEAD
M471
DECK-B
MOTOR
M481
DECK-A
MOTOR
SP902
SPEAKER
R-CH
SP901
SPEAKER
L-CH
WHT
RED
Note : There are two types of sets, former type and new type.
According to the set, parts with * mark changes as shown below.
FORMER TYPE
NEW TYPE
C119 MOUNT JUMPER WIRE
C120 MOUNT JUMPER WIRE
C219 MOUNT JUMPER WIRE
C220 MOUNT JUMPER WIRE
R101 MOUNT NO MOUNT
R102 MOUNT NO MOUNT
R201 MOUNT NO MOUNT
R202 MOUNT NO MOUNT
[MAIN BOARD]
AEP, I T Model
S305
ISS/FM MODE
ISS2/MONO
ISS1/STEREO
CNP5
J301
HEADPHONES
CNJ20
IC302
RV402
VOLUME
RV401
TONE
S351
RADIO
DUBBING
TAPE/RADIO OFF
FUNCTION
TO TUNER BOARD
CNP21
(See page 9, 10.)
CNP19
CNP4
CNP3
CNP2
CNP1
TP301
S301
REC
PB
IC301
Q102
Q202
Q301
Q302
Q303
Q304
Q306
Q307
Q308
Q309
Q311
Q316
Q317
Q320
Q323
Q324
Q325
Q326
Q327
Q328
D306
D311
D312
D316
D320
D330
OPR/BATT
HIGH SPEED
NORMAL SPEED
DUBBING
MIC301
MIC
AEP, IT, Canadian, AUS Model
E, US Model
US, E Model
KH100
AEP, IT 9P
OTHER 4P
S353 MD-B
FWD SW
ON
OFF
11,12

## 4-4. SCHEMATIC DIAGRAM —AUDIO SECTION—

【MAIN BOARD】

Note : There are two types of sets, former type and new type.
According to the set, parts with * mark changes as shown below.

| | FORMER TYPE | NEW TYPE |
|---|---|---|
| C119 | MOUNT | JUMPER WIRE |
| C120 | MOUNT | JUMPER WIRE |
| C219 | MOUNT | JUMPER WIRE |
| C220 | MOUNT | JUMPER WIRE |
| R101 | MOUNT | NO MOUNT |
| R102 | MOUNT | NO MOUNT |
| R201 | MOUNT | NO MOUNT |
| R202 | MOUNT | NO MOUNT |




Note :

- All capacitors are in μF unless otherwise noted. pF : μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- : fusible resistor.
- : printed resistor.
- Switch with sliding contact indicated by hatched lines shows shorting type.

| Note: | Note: |
|---|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié. |

- B+ : B+ Line
- : adjustment for repair.
- Total current is measured with no cassette installed.
- Power voltage is dc 9V and fed with regulated dc power supply from battery terminal.
- no mark : PLAY
  ( ) : REC
  < > : Hi-SPEED
- Voltages are taken with a VOM (Input impeadance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  : FM
  : PB (DECK A)
  : REC (DECK B)

# SECTION 5
# EXPLODED VIEWS

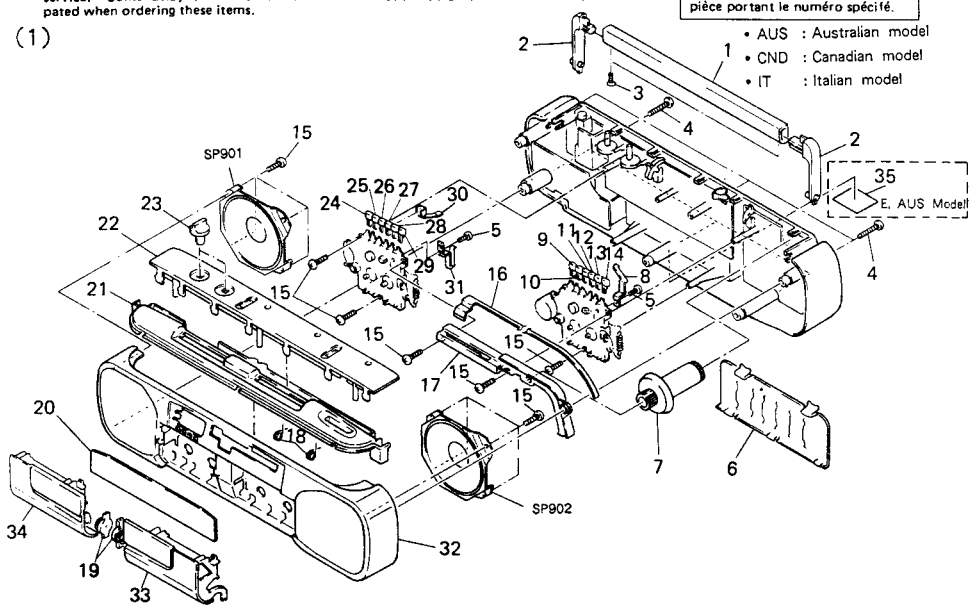
**NOTE:**

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts Example:
  *(RED) ... KNOB, BALANCE (WHITE)*
  ↑ Cabinet's Color ↑ Parts' Color

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

(1)

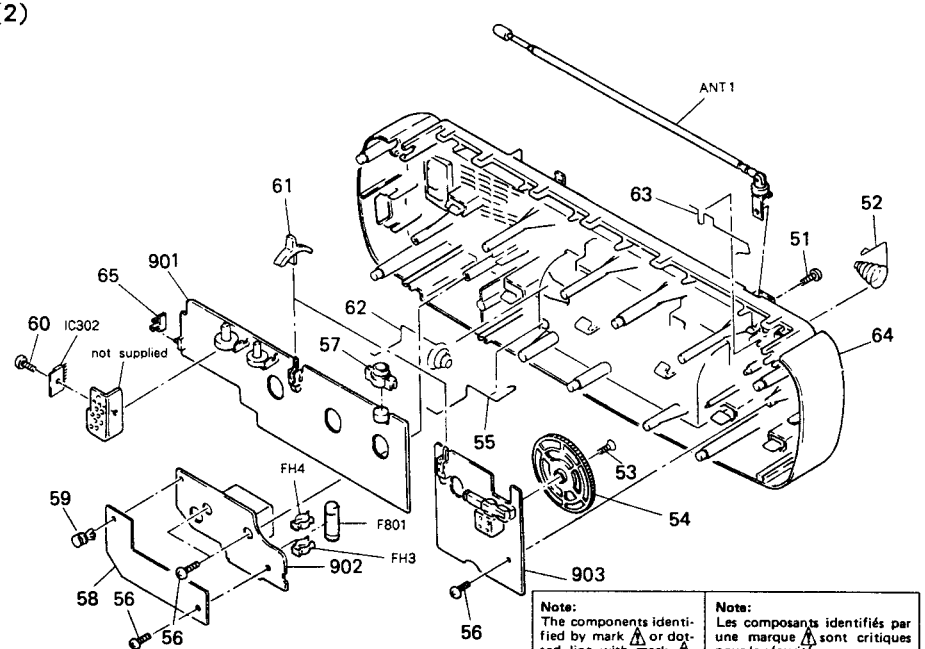



| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 1 | 3-351-314-31 | (BLK).....HANDLE (BLK) | |
| | 3-351-314-41 | (WHT).....HANDLE (WHT) | |
| | 3-351-314-51 | (AEP,IT:RED)...HANDLE (RED) | |
| 2 | 3-343-063-01 | (AEP,IT:BLK)...PLATE, SIDE, HANDLE (BLK) | |
| | 3-343-063-21 | (AEP,IT:WHT)...PLATE, SIDE, HANDLE (WHT) | |
| | 3-343-063-31 | (AEP,IT:RED)...PLATE, SIDE, HANDLE (RED) | |
| | 3-343-078-01 | (US,CND,E,AUS)...PLATE, SIDE, HANDLE | |
| 3 | 7-685-247-14 | (WHT,RED)...SCREW +KTP 3X10 TYPE2 SLIT | |
| | 7-685-247-19 | (BLK).....SCREW +KTP 3X10 TYPE2 SLIT | |
| 4 | 7-685-651-79 | SCREW +P 3X20 TYPE2 NON-SLIT | |
| 5 | 7-621-773-86 | SCREW +PTT 2.6X4 (S) | |
| 6 | 3-343-064-01 | (BLK).....LID, BATTERY CASE (BLK) | |
| | 3-343-064-11 | (WHT).....LID, BATTERY CASE (WHT) | |
| | 3-343-064-21 | (AEP,IT:RED)...LID, BATTERY CASE (RED) | |
| 7 | 3-343-097-01 | KNOB (TUNING) | |
| 8 | *3-343-077-01 | LEVER (HI SP) | |
| 9 | 3-343-085-01 | BUTTON (PAUSE A) | |
| 10 | 3-343-086-01 | BUTTON (FF A) | |
| 11 | 3-343-087-01 | BUTTON (REW A) | |
| 12 | 3-343-088-01 | BUTTON (PLAY A) | |
| 13 | 3-343-089-01 | BUTTON (HI SP) | |
| 14 | 3-343-090-01 | BUTTON (STOP/EJECT A) | |
| 15 | 7-685-648-79 | SCREW +BVTP 3X12 TYPE2 IT-3 | |
| 16 | 3-343-084-01 | POINTER | |
| 17 | *3-352-901-01 | CHASSIS (DIAL) | |
| 18 | 3-343-067-01 | SPRING (CASSETTE) | |
| 19 | 3-351-377-11 | DAMPER | |
| 20 | 3-343-083-01 | (US,CND,E,AUS:BLK)...PLATE, TRANSPARENT | |
| | 3-343-083-31 | (US,CND,E,AUS:WHT)...PLATE, TRANSPARENT | |
| | 3-352-971-21 | (AEP:BLK).....PLATE, TRANSPARENT | |
| | 3-352-971-31 | (AEP:WHT,RED)...PLATE, TRANSPARENT | |
| | 3-352-971-41 | (IT:BLK).....PLATE, TRANSPARENT | |
| | 3-352-971-51 | (IT:WHT,RED)....PLATE, TRANSPARENT | |

| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 21 | 3-352-904-01 | PANEL (MD BUTTON) | |
| 22 | 3-352-905-01 | (BLK).....PANEL (CONTROL)(BLK) | |
| | 3-352-905-31 | (WHT).....PANEL (CONTROL)(WHT) | |
| | 3-352-905-81 | (AEP,IT:RED)...PANEL (CONTROL)(RED) | |
| 23 | 3-351-338-01 | (BLK).....KNOB (VOL)(BLK) | |
| | 3-351-338-11 | (WHT).....KNOB (VOL)(WHT) | |
| | 3-351-338-21 | (AEP,IT:RED)...KNOB (VOL)(RED) | |
| 24 | 3-343-091-01 | BUTTON (PAUSE B) | |
| 25 | 3-343-092-01 | BUTTON (FF B) | |
| 26 | 3-343-093-01 | BUTTON (REW B) | |
| 27 | 3-343-094-01 | BUTTON (PLAY B) | |
| 28 | 3-343-095-01 | BUTTON (REC) | |
| 29 | 3-343-096-01 | BUTTON (STOP/EJECT B) | |
| 30 | *3-343-071-01 | LEVER (PB) | |
| 31 | *3-343-072-01 | LEVER (REC) | |
| 32 | A-3242-364-A | (BLK).....CABINET (FRONT) ASSY | |
| | X-3339-349-1 | (WHT).....CABINET (FRONT) ASSY | |
| | X-3339-350-1 | (AEP,IT:RED)...CABINET (FRONT) ASSY | |
| 33 | X-3339-354-1 | (BLK).....HOLDER (RIGHT) ASSY | |
| | X-3339-355-1 | (WHT).....HOLDER (RIGHT) ASSY | |
| | X-3339-381-1 | (AEP,IT:RED)...HOLDER (RIGHT) ASSY | |
| 34 | X-3339-351-1 | (BLK).....HOLDER (LEFT) ASSY | |
| | X-3339-352-1 | (WHT).....HOLDER (LEFT) ASSY | |
| | X-3339-353-1 | (AEP,IT:RED)...HOLDER (LEFT) ASSY | |
| 35 | *3-352-967-01 | (E).....LABEL, MODEL NUMBER | |
| | *3-352-969-01 | (AUS)...LABEL, MODEL NUMBER | |
| SP901 | 1-544-154-11 | SPEAKER (LEFT) | |
| SP902 | 1-544-154-11 | SPEAKER (RIGHT) | |



(2)



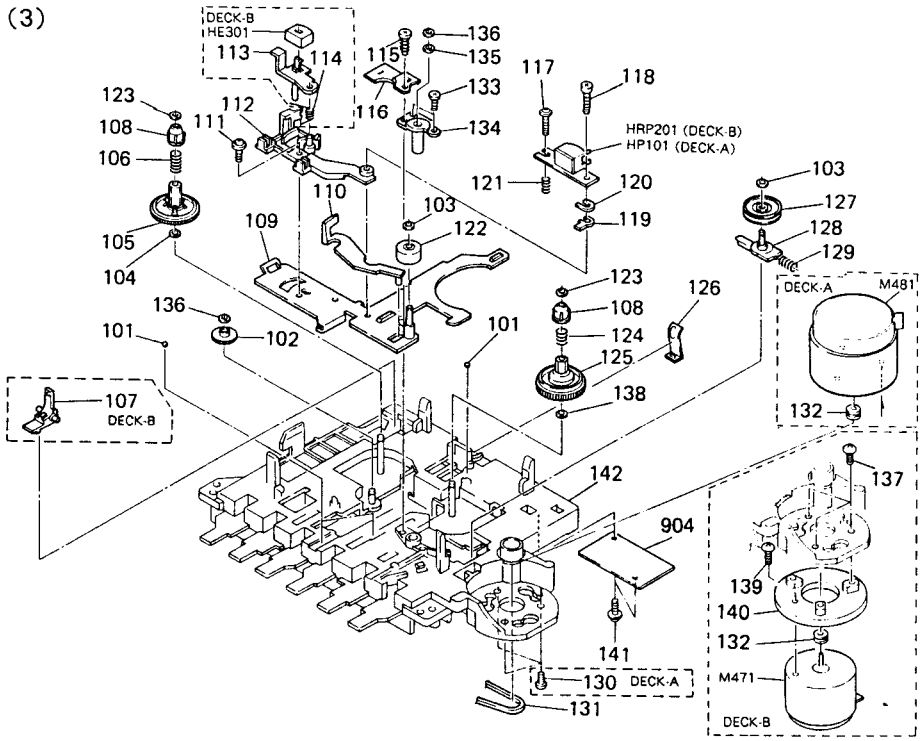

**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

**Note:**
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 51 | 7-682-548-04 | (WHT).....SCREW +B 3X8 | |
| | 7-682-548-09 | (BLK,RED)...SCREW +B 3X8 | |
| 52 | 3-343-070-01 | SPRING (+,-) | |
| 53 | 7-621-770-87 | SCREW +P 2.6X5 | |
| 54 | 3-338-505-01 | DRUM, TUNING CAPACITOR | |
| 55 | 3-343-068-01 | TERMINAL, PLUS | |
| 56 | 7-685-648-79 | SCREW +BVTP 3X12 TYPE2 IT-3 | |
| 57 | 3-321-122-01 | CUSHION, MICROPHONE | |
| 58 | *3-343-076-01 | (EXCEPT AUS)...SHEET, INSULATING | |
| 59 | 4-812-134-00 | (EXCEPT AUS)...RIVET NYLON, 3.5 | |
| 60 | 7-685-870-01 | SCREW +BVTT 3X5 (S) | |
| 61 | 3-343-062-01 | (BLK).....KNOB (FUNCTION)(BLK) | |
| | 3-343-062-11 | (WHT).....KNOB (FUNCTION)(WHT) | |
| | 3-343-062-21 | (AEP,IT:RED)...KNOB (FUNCTION)(RED) | |
| 62 | 3-343-069-01 | SPRING (-) | |
| 63 | *3-352-966-01 | TERMINAL, ANTENNA | |
| 64 | 3-343-066-11 | (AEP,IT:RED)...CABINET (REAR)(RED) | |
| | 3-352-902-01 | (US:BLK).....CABINET (REAR)(BLK) | |
| | 3-352-902-21 | (AEP,IT:BLK)...CABINET (REAR)(BLK) | |
| | 3-352-902-41 | (CND).....CABINET (REAR)(BLK) | |
| | 3-352-902-51 | (US:WHT).....CABINET (REAR)(WHT) | |
| | 3-352-902-71 | (AEP,IT:WHT)...CABINET (REAR)(WHT) | |
| | 3-352-972-01 | (E,AUS:BLK)....CABINET (REAR)(BLK) | |
| | 3-352-972-11 | (E,AUS:WHT)....CABINET (REAR)(WHT) | |

| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 65 | 3-351-313-01 | (BLK)...KNOB (ISS) | |
| | 3-351-313-11 | (WHT)...KNOB (ISS) | |
| | 3-351-313-21 | (RED)...KNOB (ISS) | |
| 901 | *A-3270-595-A | (AEP,IT).....PC BOARD ASSY, MAIN | |
| | *A-3270-597-A | (US,CND,E,AUS)...PC BOARD ASSY, MAIN | |
| 902 | *1-629-539-11 | PC BOARD, POWER | |
| 903 | *A-3266-523-A | (US,CND,E,AUS)...PC BOARD ASSY, TUNER | |
| | *A-3266-606-A | (IT).....PC BOARD ASSY, TUNER | |
| | *A-3266-608-A | (AEP).....PC BOARD ASSY, TUNER | |
| ANT1 | 1-501-375-11 | ANTENNA, TELESCOPIC | |
| F801 | ⚠1-532-285-00 | (AUS,AEP,IT)...FUSE, TIME-LAG 1.25A | |
| FH3 | 1-533-217-31 | (AUS,AEP,IT)...HOLDER, FUSE | |
| FH4 | 1-533-217-31 | (AUS,AEP,IT)...HOLDER, FUSE | |
| IC302 | 8-759-820-22 | IC LA4597 | |

(3)

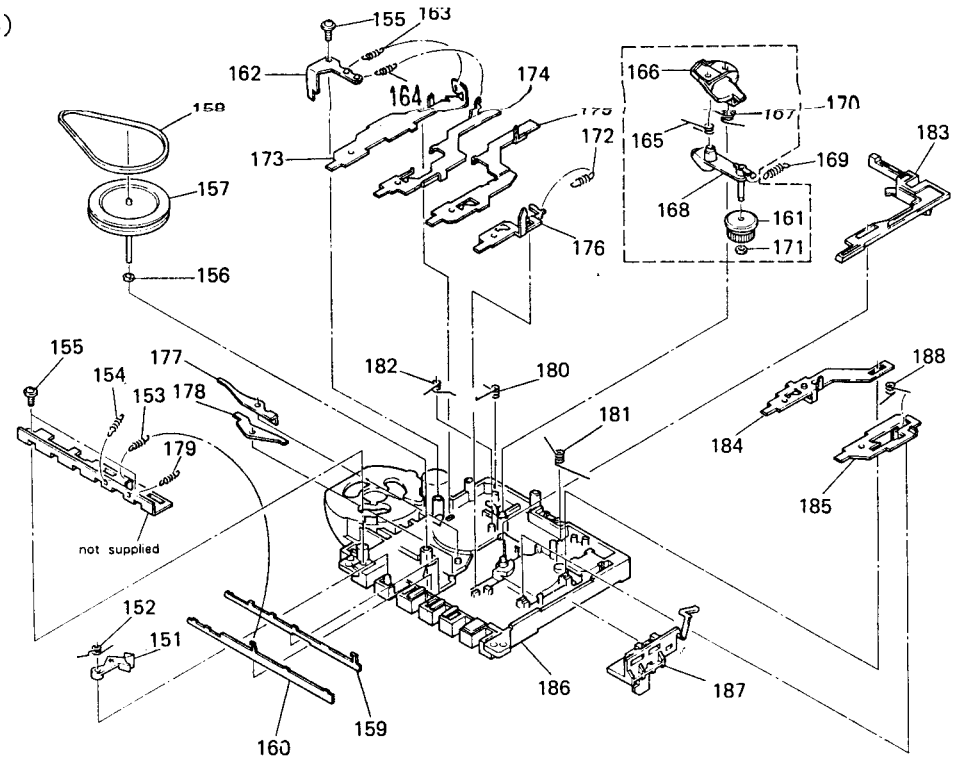



| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 101 | 7-671-112-11 | BALL, STEEL | |
| 102 | 3-558-620-11 | GEAR, REWIND | |
| 103 | 3-307-948-01 | WASHER, NYLON | |
| 104 | 3-322-659-01 | WASHER (A) | |
| 105 | 3-313-305-00 | TABLE, REEL, SUPPLY | |
| 106 | 3-313-344-00 | SPRING, COMPRESSION | |
| 107 | 3-313-357-00 | (DECK B)...CLAW, REC PREVENTION | |
| 108 | 3-313-333-00 | CLAW, REEL | |
| 109 | X-3313-311-1 | (DECK A)...CHASSIS ASSY | |
| | X-3313-311-1 | (DECK B)...CHASSIS ASSY | |
| 110 | 3-313-316-00 | LEVER SHUT-OFF DETECTION | |
| 111 | 7-621-255-35 | SCREW (2MMX5), + PWH | |
| 112 | 3-334-717-01 | BRACKET (M), HEAD | |
| 113 | *3-324-221-01 | (DECK B)...ARM (DC), ERASE HD | |
| 114 | 3-313-339-00 | (DECK B)...SPRING | |
| 115 | 7-685-134-19 | SCREW (B2.6), TAPPING | |
| 116 | *3-332-309-01 | SPRING (B) | |
| 117 | 7-621-255-55 | SCREW, LOCK | |
| 118 | 7-621-772-40 | SCREW +B 2X8 | |
| 119 | 3-331-108-01 | LUG (T), SHIM (t=0.1) | |
| | 3-331-108-11 | LUG (T), SHIM (t=0.2) | |
| | 3-331-108-21 | LUG (T), SHIM (t=0.3) | |
| | 3-331-108-31 | LUG (T), SHIM (t=0.4) | |
| | 3-331-108-41 | LUG (T), SHIM (t=0.5) | |
| 120 | 3-578-138-01 | SHIM (t=0.1) | |
| | 3-578-138-11 | SHIM (t=0.2) | |
| | 3-578-138-21 | SHIM (t=0.3) | |

| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 121 | 3-313-340-00 | SPRING, COMPRESSION | |
| 122 | 3-703-597-41 | PINCH ROLLER, STANDARD | |
| 123 | 3-558-708-01 | WASHER, STOPPER | |
| 124 | 3-313-345-00 | SPRING, COMPRESSION | |
| 125 | A-3130-031-B | TABLE ASSY, REEL, TAKE-UP | |
| 126 | 3-313-902-11 | SPRING | |
| 127 | X-3313-307-0 | PULLEY ASSY, FWD | |
| 128 | X-3313-301-0 | BRACKET ASSY, T PULLEY | |
| 129 | 3-573-464-00 | SPRING, COMPRESSION | |
| 130 | 7-621-770-87 | (DECK A)...SCREW +P 2.6X5 | |
| 131 | 3-679-171-00 | BELT | |
| 132 | X-3330-617-1 | PULLEY, MOTOR | |
| 133 | 3-318-203-71 | SCREW (B1.7X5), TAPPING | |
| 134 | X-3319-945-1 | BEARING ASSY, CAPSTAN | |
| 135 | 3-701-438-01 | WASHER | |
| 136 | 3-307-948-41 | WASHER, NYLON | |
| 137 | 7-621-775-60 | (DECK B)...SCREW, PAN | |
| 138 | 3-701-437-21 | WASHER | |
| 139 | 7-621-773-86 | (DECK B)...SCREW +P 2.6X4 | |
| 140 | 3-330-679-01 | (DECK B)...BRACKET (M), MOTOR | |
| 141 | 7-687-233-11 | SCREW (+ PTPWH) (2.6X6) | |
| 142 | A-3102-092-A | CHASSIS ASSY, MECHANICAL | |
| 904 | 1-629-540-11 | (DECK A)...PC BOARD, SW (A) | |
| | 1-629-541-11 | (DECK B)...PC BOARD, SW (B) | |
| HE301 | 1-543-525-11 | (DECK B)...HEAD, MAGNETIC (ERASE) | |
| HP101 | 1-543-319-11 | (DECK A)...HEAD, MAGNETIC (PB) | |
| HRP201 | 1-543-319-11 | (DECK B)...HEAD, MAGNETIC (REC/PB) | |
| M471 | 1-541-631-11 | (DECK B)...MOTOR, DC | |
| M481 | 1-541-630-11 | (DECK A)...MOTOR, DC | |



(4)




| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 151 | 3-313-322-02 | LEVER (A), S.OFF | |
| 152 | 3-313-323-00 | SPRING | |
| 153 | 3-313-343-00 | SPRING, TENSION | |
| 154 | 3-313-369-00 | SPRING, TENSION | |
| 155 | 7-687-233-11 | SCREW (+ PTPWH) (2.6X6) | |
| 156 | 3-701-438-11 | WASHER, 2.5 | |
| 157 | *X-3313-315-1 | FLYWHEEL (G) ASSY | |
| 158 | 3-679-171-00 | BELT | |
| 159 | *3-313-352-11 | PLATE (B), LOCK | |
| 160 | *3-313-351-16 | PLATE (A), LOCK | |
| 161 | X-3313-312-1 | IDLER ASSY, FR | |
| 162 | *3-332-310-01 | HOOK, SPRING | |
| 163 | 3-313-349-00 | SPRING, TENSION | |
| 164 | 3-313-348-00 | SPRING, TENSION | |
| 165 | 3-313-313-00 | SPRING | |
| 166 | 3-313-314-00 | LEVER (SI), FR | |
| 167 | 3-313-315-00 | SPRING | |
| 168 | X-3313-304-0 | ARM ASSY, REW | |
| 169 | 3-313-365-00 | SPRING, TENSION | |

| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 170 | A-3136-041-B | IDLER COMPLETE ASSY, FR | |
| 171 | 3-558-708-01 | WASHER, STOPPER | |
| 172 | 3-324-222-01 | SPRING (HIGH TENSION), TENSION | |
| 173 | *3-313-381-01 | LEVER (B), PAUSE BUTTON | |
| 174 | *3-313-353-00 | LEVER, FF BUTTON | |
| 175 | *3-313-354-00 | LEVER, REW BUTTON | |
| 176 | *3-313-326-00 | LEVER, FWD BUTTON | |
| 177 | *3-313-320-00 | LEVER, RCP | |
| 178 | *3-313-321-00 | LEVER, PREVENTION, RFR | |
| 179 | 3-322-691-01 | SPRING, TENSION | |
| 180 | 3-313-378-01 | SPRING (A) | |
| 181 | 3-313-327-00 | SPRING | |
| 182 | 3-313-338-00 | SPRING | |
| 183 | 3-313-356-00 | BRAKE | |
| 184 | *3-313-350-00 | LEVER, REC BUTTON | |
| 185 | *3-313-325-00 | LEVER, STOP BUTTON | |
| 186 | A-3102-092-A | CHASSIS ASSY, MECHANICAL | |
| 187 | 3-313-380-01 | CLAW (A), EJECT | |
| 188 | 3-313-331-00 | SPRING | |

# SECTION 6
# ELECTRICAL PARTS LIST

**NOTE:**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

- AUS : Australian model
- CND : Canadian model
- IT : Italian model

| Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|
| 901 | *A-3270-595-A | (AEP,IT).....PC BOARD ASSY, MAIN | | | |
| | *A-3270-597-A | (US,CND,E,AUS)...PC BOARD ASSY, MAIN | | | |
| 902 | *1-629-539-11 | PC BOARD, POWER | | | |
| 903 | *A-3266-523-A | (US,CND,E,AUS)...PC BOARD ASSY, TUNER | | | |
| | *A-3266-606-A | (IT).....PC BOARD ASSY, TUNER | | | |
| | *A-3266-608-A | (AEP).....PC BOARD ASSY, TUNER | | | |
| 904 | *1-629-540-11 | PC BOARD, SW (A)(DECK A) | | | |
| | *1-629-541-11 | PC BOARD, SW (B)(DECK B) | | | |
| ANT1 | 1-501-375-11 | ANTENNA, TELESCOPIC | | | |
| C1 | 1-162-286-31 | CERAMIC | 220PF | 10% | 50V |
| C3 | 1-164-096-11 | CERAMIC | 0.01MF | | 50V |
| C4 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C5 | 1-164-096-11 | CERAMIC | 0.01MF | | 50V |
| C6 | 1-164-039-11 | CERAMIC | 3PF | 0.25PF | 50V |
| C7 | 1-164-028-11 | (US,CND,E,AUS) ...CERAMIC | 24PF | 5% | 50V |
| C7 | 1-164-056-11 | (AEP,IT)...CERAMIC | 27PF | 5% | 50V |
| C8 | 1-102-960-00 | (NEW TYPE-1,3:US,CND,E,AUS) ...CERAMIC | 24PF | 5% | 50V |
| C8 | 1-102-961-00 | (NEW TYPE-1:AEP,IT) ...CERAMIC | 27PF | 5% | 50V |
| C8 | 1-102-959-00 | (NEW TYPE-2:IT) ...CERAMIC | 22PF | 5% | 50V |
| C8 | 1-101-982-11 | (NEW TYPE-2:AEP) ...CERAMIC | 24PF | 5% | 50V |
| C9 | 1-102-945-00 | CERAMIC | 8PF | 0.5PF | 50V |
| C10 | 1-164-012-11 | CERAMIC | 3PF | 0.25PF | 50V |
| C11 | 1-164-096-11 | CERAMIC | 0.01MF | | 50V |
| C12 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C15 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C16 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |
| C17 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C18 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C19 | 1-164-096-11 | CERAMIC | 0.01MF | | 50V |
| C20 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |
| C21 | 1-124-925-11 | ELECT | 2.2MF | 20% | 50V |
| C22 | 1-124-443-00 | ELECT | 100MF | 20% | 10V |
| C23 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C24 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C25 | 1-124-463-00 | ELECT | 0.1MF | 20% | 50V |
| C27 | 1-161-053-00 | (US,CND,E,AUS) ...CERAMIC | 0.015MF | 10% | 16V |
| C27 | 1-162-840-11 | (AEP,IT)...CERAMIC | 0.012MF | 10% | 16V |
| C28 | 1-161-053-00 | (US,CND,E,AUS) ...CERAMIC | 0.015MF | 10% | 16V |
| C28 | 1-162-840-11 | (AEP,IT)...CERAMIC | 0.012MF | 10% | 16V |
| C29 | 1-124-463-00 | ELECT | 0.1MF | 20% | 50V |
| C30 | 1-124-463-00 | ELECT | 0.1MF | 20% | 50V |
| C31 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C32 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C33 | 1-162-187-31 | CERAMIC | 1PF | 20% | 50V |
| C34 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C35 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C102 | 1-162-291-31 | CERAMIC | 560PF | 10% | 50V |
| C103 | 1-162-291-31 | CERAMIC | 560PF | 10% | 50V |
| C104 | 1-162-286-31 | CERAMIC | 220PF | 10% | 50V |
| C105 | 1-162-286-31 | CERAMIC | 220PF | 10% | 50V |
| C106 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C107 | 1-162-842-11 | CERAMIC | 0.018MF | 10% | 16V |
| C108 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |
| C110 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |
| C111 | 1-162-293-31 | CERAMIC | 820PF | 10% | 50V |
| C112 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C115 | 1-162-291-31 | CERAMIC | 560PF | 10% | 50V |
| C116 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |
| C117 | 1-162-292-31 | CERAMIC | 66JPF | 10% | 50V |
| C118 | 1-162-294-31 | CERAMIC | 0.001MF | 10% | 50V |
| C128 | 1-161-020-11 | CERAMIC | 0.039MF | 10% | 16V |
| C152 | 1-162-291-31 | CERAMIC | 560PF | 10% | 50V |
| C153 | 1-124-443-00 | ELECT | 100MF | 20% | 10V |
| C154 | 1-124-443-00 | ELECT | 100MF | 20% | 10V |
| C155 | 1-130-495-00 | MYLAR | 0.1MF | 5% | 50V |
| C156 | 1-124-471-00 | ELECT | 1000MF | 20% | 6.3V |
| C202 | 1-162-291-31 | CERAMIC | 560PF | 10% | 50V |
| C203 | 1-162-291-31 | CERAMIC | 560PF | 10% | 50V |
| C204 | 1-162-286-31 | CERAMIC | 220PF | 10% | 50V |
| C205 | 1-162-286-31 | CERAMIC | 220PF | 10% | 50V |
| C206 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C207 | 1-162-842-11 | CERAMIC | 0.018MF | 10% | 16V |
| C208 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |
| C210 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |
| C211 | 1-162-293-31 | CERAMIC | 820PF | 10% | 50V |
| C212 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C215 | 1-162-291-31 | CERAMIC | 560PF | 10% | 50V |
| C216 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |
| C217 | 1-162-292-31 | CERAMIC | 680PF | 10% | 50V |
| C218 | 1-162-294-31 | CERAMIC | 0.001MF | 10% | 50V |
| C228 | 1-161-020-11 | CERAMIC | 0.039MF | 10% | 16V |
| C252 | 1-162-291-31 | CERAMIC | 560PF | 10% | 50V |
| C253 | 1-124-443-00 | ELECT | 100MF | 20% | 10V |
| C254 | 1-124-443-00 | ELECT | 100MF | 20% | 10V |
| C255 | 1-130-495-00 | MYLAR | 0.1MF | 5% | 50V |
| C256 | 1-124-471-00 | ELECT | 1000MF | 20% | 6.3V |
| C301 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C302 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C303 | 1-126-176-11 | ELECT | 220MF | 20% | 10V |
| C306 | 1-124-443-00 | ELECT | 100MF | 20% | 10V |
| C307 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C308 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C310 | 1-161-494-00 | CERAMIC | 0.022MF | | 25V |
| C313 | 1-130-471-00 | MYLAR | 0.001MF | 5% | 50V |
| C314 | 1-162-286-31 | (AEP,IT)...CERAMIC | 220PF | 10% | 50V |
| C315 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C316 | 1-161-379-00 | CERAMIC | 0.01MF | 30% | 16V |
| C317 | 1-161-327-00 | CERAMIC | 0.0033MF | 20% | 16V |
| C318 | 1-124-604-00 | ELECT | 330MF | 20% | 10V |
| C319 | 1-161-494-00 | CERAMIC | 0.022MF | | 25V |
| C320 | 1-161-494-00 | CERAMIC | 0.022MF | | 25V |
| C321 | 1-161-494-00 | CERAMIC | 0.022MF | | 25V |
| C340 | 1-126-233-11 | ELECT | 22MF | 20% | 25V |
| C341 | 1-124-463-00 | ELECT | 0.1MF | 20% | 50V |
| C342 | 1-161-494-00 | CERAMIC | 0.022MF | | 25V |
| C344 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C345 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C348 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C351 | 1-124-120-11 | ELECT | 220MF | 20% | 16V |
| C352 | 1-124-477-11 | ELECT | 47MF | 20% | 16V |
| C370 | 1-124-443-00 | ELECT | 100MF | 20% | 10V |
| C801 | 1-101-005-00 | CERAMIC | 0.022MF | | 50V |
| C802 | 1-101-005-00 | CERAMIC | 0.022MF | | 50V |
| C803 | 1-101-005-00 | CERAMIC | 0.022MF | | 50V |
| C804 | 1-101-005-00 | CERAMIC | 0.022MF | | 50V |
| C805 | 1-124-887-00 | ELECT | 3300MF | 20% | 16V |
| CF2 | 1-527-870-00 | FILTER | | | |
| CF1, CF3 | 1-567-166-00 | FILTER, CERAMIC | | | |
| CNJ801 | ⚠1-526-818-11 | (US,CND,E).....INLET, AC 2P | | | |
| CNJ801 | ⚠1-526-838-11 | (AUS,AEP,IT)...INLET, AC 2P | | | |
| CNP1 | *1-506-985-11 | PIN, CONNECTOR (PC BOARD) 3P | | | |
| CNP2 | *1-506-986-11 | PIN, CONNECTOR (PC BOARD) 4P | | | |
| CNP3 | *1-506-989-11 | PIN, CONNECTOR (PC BOARD) 7P | | | |
| CNP4 | *1-506-989-11 | PIN, CONNECTOR (PC BOARD) 7P | | | |
| CNP5 | *1-506-986-11 | PIN, CONNECTOR (PC BOARD) 4P | | | |
| CNP19 | *1-560-530-00 | PIN, CONNECTOR 2P | | | |
| CNP21 | *1-506-986-11 | (US,CND,E,AUS) ...PIN, CONNECTOR(PC BOARD) 4P | | | |
| CNP21 | *1-506-987-11 | (AEP,IT)...PIN, CONNECTOR(PC BOARD) 5P | | | |
| CT1-4, CV1-4 | 1-151-615-11 | (AEP,IT).....CAP, VARIABLE(TUNING) | | | |
| CT1-4, CV1-4 | 1-151-624-11 | (US,CND,E,AUS)...CAP, VARIABLE(TUNING) | | | |
| D11 | 8-719-918-76 | LED GL-3PR9 | | | |
| D303 | 8-719-911-19 | DIODE 1SS119 | | | |
| D305 | 8-719-911-19 | DIODE 1SS119 | | | |
| D306 | 8-719-110-08 | DIODE RD8.2ES-B2 | | | |
| D311 | 8-719-109-97 | DIODE RD6.8ES-B2 | | | |
| D312 | 8-719-918-76 | LED GL-3PR9 | | | |
| D316 | 8-719-911-19 | DIODE 1SS119 | | | |
| D319 | 8-719-911-19 | DIODE 1SS119 | | | |
| D320 | 8-719-110-08 | DIODE RD8.2ES-B2 | | | |
| D321 | 8-719-911-19 | DIODE 1SS119 | | | |
| D330 | 8-719-911-19 | DIODE 1SS119 | | | |
| D801 | 8-719-200-02 | DIODE 10E2 | | | |
| D802 | 8-719-200-02 | DIODE 10E2 | | | |
| D803 | 8-719-200-02 | DIODE 10E2 | | | |
| D804 | 8-719-200-02 | DIODE 10E2 | | | |
| F801 | ⚠1-532-285-00 | (AUS,AEP,IT)...FUSE, TIME-LAG 1.25A | | | |
| FH3 | 1-533-217-31 | (AUS,AEP,IT)...HOLDER, FUSE | | | |
| FH4 | 1-533-217-31 | (AUS,AEP,IT)...HOLDER, FUSE | | | |
| FL1 | 1-236-022-11 | FILTER, BAND PASS | | | |
| HE301 | 1-543-525-11 | (DECK B)...HEAD, MAGNETIC (ERASE) | | | |
| HP101 | 1-543-319-11 | (DECK A)...HEAD, MAGNETIC (PB) | | | |
| HRP201 | 1-543-319-11 | (DECK B)...HEAD, MAGNETIC (REC/PB) | | | |
| IC1 | 8-752-035-68 | IC CXA1238S | | | |
| IC301 | 8-759-231-77 | IC TA8149N | | | |
| IC302 | 8-759-820-22 | IC LA4597 | | | |
| J301 | 1-568-267-11 | JACK (HEADPHONES) | | | |
| KH100 | *1-565-386-11 | HOLDER, CABLE 5P | | | |
| KH471 | *1-565-384-11 | HOLDER, CABLE 3P | | | |
| L1 | 1-420-855-00 | (EXCEPT IT)...COIL, FM ANT | | | |
| L1 | *1-422-180-11 | (IT)....COIL, AIR-CORE (RF) | | | |
| L2 | 1-406-161-11 | (NEW TYPE-3:US,CND,E,AUS) ...COIL FM OSCILATOR | | | |
| L2 | 1-459-418-00 | (NEW TYPE-2:AEP,IT)..COIL (WITH CORE) | | | |
| L2 | 1-459-815-11 | (NEW TYPE-1).....COIL (WITH CORE) | | | |
| L3 | 1-402-158-11 | (AEP,IT).....ANTENNA, FERRITE-ROD(MW) | | | |
| L3 | 1-402-416-11 | (US,CND,E,AUS)..ANTENNA, FERRITE-ROD(AM) | | | |
| L4 | 1-406-040-00 | COIL (OSC) | | | |
| M471 | 1-151-631-11 | (DECK B)...MOTOR DC | | | |
| M481 | 1-151-630-11 | (DECK A)...MOTOR DC | | | |
| MIC301 | 1-542-092-11 | MICROPHONE, ELECTRET CONDENSER | | | |
| Q1 | 8-729-904-36 | (AEP,IT)...TRANSISTOR DTC114YS | | | |
| Q102 | 8-729-900-74 | TRANSISTOR DTC143TS | | | |
| Q202 | 8-729-900-74 | TRANSISTOR DTC143TS | | | |
| Q301 | 8-729-904-36 | TRANSISTOR DTC114YS | | | |
| Q302 | 8-729-281-53 | TRANSISTOR 2SC1815-GR | | | |
| Q303 | 8-729-904-36 | TRANSISTOR DTC114YS | | | |
| Q304 | 8-729-904-36 | TRANSISTOR DTC114YS | | | |
| Q307 | 8-729-904-36 | TRANSISTOR DTC114YS | | | |
| Q308 | 8-729-904-36 | TRANSISTOR DTC114YS | | | |
| Q309 | 8-729-115-30 | TRANSISTOR 2SK105A-30 | | | |
| Q310 | 8-729-115-30 | TRANSISTOR 2SK105A-30 | | | |
| Q311 | 8-729-177-32 | TRANSISTOR 2SD773 | | | |
| Q316 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | | | |
| Q317 | 8-729-900-74 | TRANSISTOR DTC143TS | | | |
| Q320 | 8-729-900-74 | TRANSISTOR DTC143TS | | | |

**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

**Note:**
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

CFS-W303

| Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|
| Q323 | 8-729-904-36 | TRANSISTOR DTC114YS | | | |
| Q324 | 8-729-808-76 | TRANSISTOR 2SD1913SA | | | |
| Q325 | 8-729-195-23 | TRANSISTOR 2SA952 | | | |
| Q327 | 8-729-195-23 | TRANSISTOR 2SA952 | | | |
| Q328 | 8-729-808-76 | TRANSISTOR 2SD1913SA | | | |
| Q329 | 8-729-904-36 | TRANSISTOR DTC114YS | | | |
| R1 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R2 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R3 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R5 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R6 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R7 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W |
| R9 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R10 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R11 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R12 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R13 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R14 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R15 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R16 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W |
| R17 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R19 | 1-249-416-11 | CARBON | 820 | 5% | 1/4W |
| R20 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R21 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W |
| R23 | 1-249-429-11 | (AEP,IT)...CARBON | 10K | 5% | 1/4W |
| ●R103 | 1-215-473-00 | CARBON | 150K | 10% | 1/4W |
| ●R104 | 1-249-405-11 | CARBON | 100 | 10% | 1/4W |
| R105 | 1-247-885-00 | CARBON | 180K | 5% | 1/4W |
| ●R106 | 1-249-427-11 | CARBON | 6.8K | 10% | 1/4W |
| ●R107 | 1-249-427-11 | CARBON | 6.8K | 10% | 1/4W |
| ●R108 | 1-249-429-11 | CARBON | 10K | 10% | 1/4W |
| ●R109 | 1-249-426-11 | CARBON | 5.6K | 10% | 1/4W |
| ●R110 | 1-249-417-11 | CARBON | 1K | 10% | 1/4W |
| ●R111 | 1-249-417-11 | CARBON | 1K | 10% | 1/4W |
| ●R112 | 1-249-437-11 | CARBON | 47K | 10% | 1/4W |
| ●R113 | 1-249-419-11 | CARBON | 1.5K | 10% | 1/4W |
| R114 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| ●R115 | 1-249-407-11 | CARBON | 150 | 10% | 1/4W |
| ●R116 | 1-247-885-00 | CARBON | 180K | 10% | 1/4W |
| ●R117 | 1-249-433-11 | CARBON | 22K | 10% | 1/4W |
| ●R121 | 1-249-425-11 | CARBON | 4.7K | 10% | 1/4W |
| ●R122 | 1-249-426-11 | CARBON | 5.6K | 10% | 1/4W |
| ●R125 | 1-249-426-11 | CARBON | 5.6K | 10% | 1/4W |
| ●R126 | 1-249-429-11 | CARBON | 10K | 10% | 1/4W |
| R151 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R154 | 1-249-403-11 | CARBON | 68 | 5% | 1/4W |
| ●R203 | 1-215-473-00 | CARBON | 150K | 10% | 1/4W |
| ●R204 | 1-249-405-11 | CARBON | 100 | 10% | 1/4W |
| R205 | 1-247-885-00 | CARBON | 180K | 5% | 1/4W |
| ●R206 | 1-249-427-11 | CARBON | 6.8K | 10% | 1/4W |
| ●R207 | 1-249-427-11 | CARBON | 6.8K | 10% | 1/4W |
| ●R208 | 1-249-429-11 | CARBON | 10K | 10% | 1/4W |
| ●R209 | 1-249-426-11 | CARBON | 5.6K | 10% | 1/4W |
| ●R210 | 1-249-417-11 | CARBON | 1K | 10% | 1/4W |
| ●R211 | 1-249-417-11 | CARBON | 1K | 10% | 1/4W |
| ●R212 | 1-249-437-11 | CARBON | 47K | 10% | 1/4W |
| R213 | 1-249-419-11 | CARBON | 1.5K | 5% | 1/4W |

●: This set equips "PRINTING RESISTOR" When in the circuit. When repairing, replac "PRINTING RESISTOR" with conventional "CARBON RESISTOR" refer to the electrical parts list.

| Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|
| ●R214 | 1-249-421-11 | CARBON | 2.2K | 10% | 1/4W |
| ●R215 | 1-249-407-11 | CARBON | 150 | 10% | 1/4W |
| R216 | 1-247-885-00 | CARBON | 180K | 5% | 1/4W |
| ●R217 | 1-249-433-11 | CARBON | 22K | 10% | 1/4W |
| ●R221 | 1-249-425-11 | CARBON | 4.7K | 10% | 1/4W |
| ●R222 | 1-249-426-11 | CARBON | 5.6K | 10% | 1/4W |
| ●R225 | 1-249-426-11 | CARBON | 5.6K | 10% | 1/4W |
| ●R226 | 1-249-429-11 | CARBON | 10K | 10% | 1/4W |
| ●R251 | 1-249-417-11 | CARBON | 1K | 10% | 1/4W |
| R254 | 1-249-403-11 | CARBON | 68 | 5% | 1/4W |
| ●R301 | 1-249-429-11 | CARBON | 10K | 10% | 1/4W |
| ●R302 | 1-249-421-11 | CARBON | 2.2K | 10% | 1/4W |
| ●R303 | 1-249-429-11 | CARBON | 10K | 10% | 1/4W |
| ●R304 | 1-249-432-11 | CARBON | 18K | 10% | 1/4W |
| ●R305 | 1-249-429-11 | CARBON | 10K | 10% | 1/4W |
| R309 | 1-247-903-00 | CARBON | 1M | 5% | 1/4W |
| ●R310 | 1-249-429-11 | CARBON | 10K | 10% | 1/4W |
| R313 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W |
| R314 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R315 | 1-249-402-11 | CARBON | 56 | 5% | 1/4W |
| R316 | 1-249-390-11 | CARBON | 5.6 | 5% | 1/4W |
| R317 | ⚠1-212-849-00 | (CND,AUS,AEP,IT, ...FUSIBLE | 4.7 | 5% | 1/4W F |
| R318 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W |
| R320 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W |
| ●R321 | 1-215-406-00 | CARBON | 240 | 10% | 1/4W |
| ●R323 | 1-249-441-11 | CARBON | 100K | 10% | 1/4W |
| ●R324 | 1-249-425-11 | CARBON | 4.7K | 10% | 1/4W |
| ●R325 | 1-249-441-11 | CARBON | 100K | 10% | 1/4W |
| ●R326 | 1-249-426-11 | CARBON | 5.6K | 10% | 1/4W |
| ●R329 | 1-249-441-11 | CARBON | 100K | 10% | 1/4W |
| ●R330 | 1-249-426-11 | CARBON | 5.6K | 10% | 1/4W |
| ●R333 | 1-249-414-11 | CARBON | 560 | 10% | 1/4W |
| ●R338 | 1-249-421-11 | CARBON | 2.2K | 10% | 1/4W |
| R339 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R340 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R341 | 1-247-804-11 | CARBON | 75 | 5% | 1/4W |
| ●R343 | 1-249-433-11 | CARBON | 22K | 10% | 1/4W |
| ●R344 | 1-249-421-11 | CARBON | 2.2K | 10% | 1/4W |
| ●R345 | 1-249-417-11 | CARBON | 1K | 10% | 1/4W |
| R348 | 1-249-407-11 | CARBON | 150 | 5% | 1/4W |
| R349 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R350 | 1-247-804-11 | CARBON | 75 | 5% | 1/4W |
| ●R351 | 1-249-426-11 | CARBON | 5.6K | 10% | 1/4W |
| ●R352 | 1-249-421-11 | CARBON | 2.2K | 10% | 1/4W |
| ●R354 | 1-249-429-11 | CARBON | 10K | 10% | 1/4W |
| R369 | ⚠1-217-638-00 | (CND,AUS,AEP,IT) ...FUSIBLE | 1.5 | 5% | 1/4W F |
| R373 | ⚠1-217-638-00 | (CND,AUS,AEP,IT) ...FUSIBLE | 1.5 | 5% | 1/4W F |
| R380 | ⚠1-217-640-11 | (CND,AUS,AEP,IT) ...FUSIBLE | 3.3 | 5% | 1/4W F |
| R386 | 1-249-401-11 | CARBON | 47 | 5% | 1/4W |
| RV1 | 1-228-995-00 | RES, ADJ, CARBON 22K (VCO) | | | |
| RV301 | 1-230-719-11 | RES, ADJ, CARBON 2K(TAPE SPEED A-HIGH) | | | |
| RV302 | 1-230-720-11 | RES, ADJ, CARBON 5K(TAPE SPEED A-NOR) | | | |

| Note: | Note: |
|---|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié. |



| Ref.No. | Part No. | Description |
|---|---|---|
| RV303 | 1-230-719-11 | RES, ADJ, CARBON 2K(TAPE SPEED B-NOR) |
| RV304 | 1-230-720-11 | RES, ADJ, CARBON 5K(TAPE SPEED B-HIGH) |
| RV401 | 1-238-431-11 | RES, VAR, CARBON 20K/20K (TONE) |
| RV402 | 1-238-430-11 | RES, VAR, CARBON 20K/20K (VOLUME) |
| S1 | 1-570-729-11 | SWITCH, LEVER SLIDE (BAND) |
| S301 | 1-571-876-11 | SWITCH, SLIDE (REC/PB) |
| S304 | 1-572-245-11 | SWITCH, SLIDE (DUBBING) |
| S305 | 1-571-547-11 | (AEP,IT)...SWITCH, SLIDE (ISS/FM MODE) |
| S351 | 1-571-833-11 | SWITCH, LEVER SLIDE (FUNCTION) |
| S353 | 1-571-831-11 | SWITCH, PUSH (1 KEY)(MD-B FWD) |
| S471 | 1-572-116-11 | SWITCH, LEAF (MD-B POWER) |
| S481 | 1-572-116-11 | SWITCH, LEAF (MD-A POWER) |
| SP901 | 1-544-154-11 | SPEAKER (LEFT) |
| SP902 | 1-544-154-11 | SPEAKER (RIGHT) |
| T1 | 1-404-355-00 | TRANSFORMER, IF |
| T301 | 1-433-346-11 | TRANSFORMER, BIAS OSCILLATION |
| T801 | ⚠1-449-538-11 | (AUS).....TRANSFORMER, POWER |
| T801 | ⚠1-449-540-11 | (US,E).....TRANSFORMER, POWER |
| T801 | ⚠1-449-541-11 | (AEP,IT)...TRANSFORMER, POWER |
| T801 | ⚠1-449-650-11 | (CND).....TRANSFORMER, POWER |

ACCESSORY & PACKING MATERIAL

| | | |
|---|---|---|
| ⚠1-555-074-00 | (AUS)..... | CORD, POWER |
| ⚠1-558-835-11 | (AEP,IT)..... | CORD, POWER |
| ⚠1-559-047-21 | (US,CND,E)... | CORD, POWER |
| *3-352-938-01 | CUSHION (LEFT) (RIGHT) | |
| *3-352-940-01 | (US,AUS,AEP,IT)... | INDIVIDUAL CARTON |
| *3-352-941-01 | (E)..... | INDIVIDUAL CARTON |
| *3-352-942-01 | (CND)..... | INDIVIDUAL CARTON |
| 3-750-179-21 | (US,CND,E,AUS) ..... | MANUAL, INSTRUCTION (English) |
| 3-750-179-31 | (CND)..... | MANUAL, INSTRUCTION (French) |
| 3-750-179-51 | (E)..... | MANUAL, INSTRUCTION (Spanish) |
| 3-750-179-71 | (IT)..... | MANUAL, INSTRUCTION (Italian) |
| 3-750-179-81 | (AEP)..... | MANUAL, INSTRUCTION (English,Spanish,Dutch,Swedish) |

| Note: | Note: |
|---|---|
| The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified. | Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié. |